

WHAT IS CLAIMED IS:

1. An energy device comprising a winding body in which a band-shaped laminate having a flexible elongated substrate, a negative collector, a solid electrolyte, a positive active material, and a positive collector in this order is wound in a plate shape with the flexible elongated substrate placed inside.
2. The energy device according to claim 1, wherein the flexible elongated substrate is made of an insulating material.
3. The energy device according to claim 1, further comprising a negative active material between the negative collector and the solid electrolyte.
4. The energy device according to claim 3, wherein a thickness of the negative active material is smaller than that of the positive active material.
5. The energy device according to claim 1, wherein a minimum radius of an outer surface of the flexible elongated substrate is in a range of 5 times to 100 times a thickness of the band-shaped laminate excluding the flexible elongated substrate.
6. An energy device comprising a winding body in which a band-shaped laminate having a flexible elongated substrate, a negative collector, a solid electrolyte, a positive active material, and a positive collector in this order is wound in a plate shape with the flexible elongated substrate placed inside, and an inner core placed in a winding core portion of the winding body.
7. The energy device according to claim 6, wherein the flexible elongated substrate is made of an insulating material.
8. The energy device according to claim 6, further comprising a negative active material between the negative collector and the solid electrolyte.
9. The energy device according to claim 8, wherein a thickness of the negative active material is smaller than that of the positive active material.
10. The energy device according to claim 6, wherein the inner core has a

substantially plate shape, and a total of a half of a thickness of the inner core and a thickness of the flexible elongated substrate is in a range of 5 times to 100 times a thickness of the band-shaped laminate excluding the flexible elongated substrate.

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11. A method for producing an energy device, comprising:

laminating a negative collector, a solid electrolyte, a positive active material, and a positive collector in this order on a flexible elongated substrate to obtain a band-shaped laminate; and

10 winding the band-shaped laminate in a plate shape with the flexible elongated substrate placed inside to obtain a winding body.

12. The method for producing an energy device according to claim 11, further comprising pressing the winding body wound in a plate shape to promote  
15 flattening of the winding body, after winding the band-shaped laminate in a plate shape.

13. The method for producing an energy device according to claim 11, wherein a negative active material is laminated between the negative  
20 collector and the solid electrolyte.

14. The method for producing an energy device according to claim 11, wherein the band-shaped laminate is obtained by a vacuum film-forming method.  
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15. The method for producing an energy device according to claim 14, wherein the vacuum film-forming method is one selected from the group consisting of vapor deposition, sputtering, ion plating, and laser abrasion.

30 16. The method for producing an energy device according to claim 11, wherein the band-shaped laminate is obtained by a wet coating method.

17. The method for producing an energy device according to claim 16, wherein the wet coating method is one selected from the group consisting of  
35 gravure coating, reverse coating, spray coating, screen coating, and offset coating.

18. The method for producing an energy device according to claim 12, wherein an inner core is present in a winding core portion of the winding body during pressing.
- 5 19. The method for producing an energy device according to claim 11, further comprising providing the winding body with external electrodes.
20. The method for producing an energy device according to claim 19, wherein the external electrodes are provided by thermal spraying, plating, or  
10 coating.
21. A method for producing an energy device, comprising:  
    laminating a negative collector, a solid electrolyte, a positive active material, and a positive collector in this order on a flexible elongated  
15 substrate to obtain a band-shaped laminate;  
    winding the band-shaped laminate in a substantially cylindrical shape with the flexible elongated substrate placed inside to obtain a winding body; and  
    pressing the winding body wound in a substantially cylindrical shape  
20 to obtain a plate-shaped winding body.
22. The method for producing an energy device according to claim 21, wherein a negative active material is laminated between the negative collector and the solid electrolyte.  
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23. The method for producing an energy device according to claim 21, wherein the band-shaped laminate is obtained by a vacuum film-forming method.
- 30 24. The method for producing an energy device according to claim 23, wherein the vacuum film-forming method is one selected from the group consisting of vapor deposition, sputtering, ion plating, and laser abrasion.
25. The method for producing an energy device according to claim 21,  
35 wherein the band-shaped laminate is obtained by a wet coating method.
26. The method for producing an energy device according to claim 25,

wherein the wet coating method is one selected from the group consisting of gravure coating, reverse coating, spray coating, screen coating, and offset coating.

5    27. The method for producing an energy device according to claim 21, wherein an inner core is present in a winding core portion of the winding body during pressing.

10   28. The method for producing an energy device according to claim 21, further comprising providing the plate-shaped winding body with external electrodes.

29. The method for producing an energy device according to claim 28, wherein the external electrodes are provided by thermal spraying, plating, or coating.